AMENDMENT UNDER 37 C.F.R. 1.116 – EXPEDITED PROCEDURE
Serial Number: 09/476,219
Filing Date: December 30, 1999
Title: NON-LINEAR ADAPTIVE VOLTAGE POSITIONING FOR DC-DC CONVERTERS
Assignee: Intel Corporation

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IN THE CLAIMS

Please amend the claims as follows.

1. (Currently Amended) A method of providing a voltage from a DC-DC converter such that the voltage provided varies dependent on the current drawn from the DC-DC converter, comprising:

sensing a current drawn from the DC-DC converter; and

adjusting the voltage provided from the DC-DC converter such that the voltage is at a ~~maximum current~~ minimum operating voltage level when the current drawn is at a maximum load current level and the voltage is at a ~~minimum current~~ maximum operating voltage level when the current drawn is at a minimum operating but nonzero load current level.

2. (Original) The method of claim 1, further comprising adjusting the voltage provided from the DC-DC converter to provide a substantially linear voltage response with respect to current drawn between the maximum load current level and the minimum load current level.

3. (Original) The method of claim 1, further comprising adjusting the voltage provided from the DC-DC converter such that the voltage is at the minimum current voltage level when the current drawn is below the minimum load current level.

4. (Original) The method of claim 1, wherein the minimum load current level is the minimum current drawn by a known load device having a minimum current draw of greater than no current.

5. (Original) The method of claim 1, wherein the minimum load current level is a selected current level between but not including no current and the maximum load current level.

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6.   (Original) The method of claim 1, wherein sensing a current drawn from the DC-DC converter comprises sensing the voltage across a current sensing resistor connected in series with an output of the DC-DC converter.

7.   (Previously Presented) A method of providing a voltage from a DC-DC converter such that the voltage provided varies dependent on the current drawn from the DC-DC converter, comprising:

sensing an output current drawn from the DC-DC converter;

converting the sensed output current to a voltage signal indicating the sensed output current;

adjusting the voltage signal indicating the sensed output current such that the voltage is at a minimum level when the current drawn is at a maximum load current level and the voltage is at a maximum level when the current drawn is at a minimum but nonzero load current level; and

adding the adjusted voltage signal to the voltage provided by the DC-DC converter.

8.   (Currently Amended) A method of providing a voltage from a DC-DC converter such that the voltage provided varies dependent on the current drawn from the DC-DC converter, comprising:

sensing an output current drawn from the DC-DC converter;

converting the sensed output current to a voltage signal indicating the sensed output current;

adjusting the voltage signal indicating the sensed output current such that the voltage is at a maximum ~~current~~-voltage level when the current drawn is at a maximum load current level and the voltage is at a minimum ~~current~~-voltage level when the current drawn is at a minimum but nonzero load current level; and

subtracting the adjusted voltage signal from the voltage provided by the DC-DC converter.

9.   (Currently Amended) A DC-DC converter, comprising:

a module operable to sense a current drawn from the DC-DC converter and further operable to adjust the voltage provided from the DC-DC converter such that the voltage is at a ~~maximum current~~ minimum operating voltage level when the current drawn is at a maximum load current level and the voltage is at a ~~minimum current~~ maximum operating voltage level when the current drawn is at a minimum but nonzero operating load current level.

10.   (Original) The DC-DC converter of claim 9, wherein adjusting the voltage in response to the sensed current is performed via hardware.

11.   (Original) The DC-DC converter of claim 9, wherein adjusting the voltage in response to the sensed current is performed via software executing on a processor.

12.   (Original) The DC-DC converter of claim 9, wherein sensing a current drawn from the DC-DC converter comprises measuring the voltage across a current sensing resistor connected in series with an output of the DC-DC converter.

13.   (Original) The DC-DC converter of claim 9, wherein the module is further operable to provide a substantially linear voltage response with respect to current drawn between the maximum load current level and the minimum load current level.

14.   (Original) The DC-DC converter of claim 9, wherein the module is further operable to provide a voltage at the minimum current voltage level when the current drawn is below the minimum load current level.

15.   (Original) The DC-DC converter of claim 9, wherein the minimum load current level is the minimum current drawn by a known load device having a minimum current draw of greater than no current.

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16.   (Original) The DC-DC converter of claim 9, wherein the minimum load current level is a selected current level between but not including no current and the maximum load current level.